REMARKS

By this amendment, claims 1-3 and 9 have been amended in the application. Currently, claims 1-14 are pending in the application.

Examiner Bullock and Examiner Wu are thanked for the courtesies extended to the undersigned during the personal interview on December 16, 2008. During the interview, applicants' representative gave a general overview and review of the invention and Moore et al. Based on the Examiners' review of the claims, applicants were requested to clarify how the priority was obtained by the files and also clarify the terminology related to the plurality of slots, the access controller and the file system controller. Applicants were also advised to review the method claims to avoid possible 101 issues. Examiner Bullock stated that the proposed claim changes appeared to overcome the cited reference to Moore et al. although; no final agreement was reached regarding allowability of the claims, pending the clarification requested by the Examiners.

By this amendment, applicants have clarified, as requested, the terms such as the slots, the access controller and the file

system controller. Also, applicants believe that how the priority was obtained for the files is set forth in claims 1 and 3. Applicants have also reviewed the method claims and believe that there is sufficient connection to hardware to avoid any 35 USC 101 problems.

The final office action and present invention are reviewed and discussed below along with the claim amendments presented in this Preliminary Amendment.

Claims 1-14 were rejected under 35 USC 102(e) as being unpatentable over Moore et al. (U.S. Patent Application Publication No. 2004/0230599). This rejection is respectfully traversed in view of the amendments to independent claims 1 and 9 and the remarks below.

The present invention relates to a file management method for unifying and managing a plurality of information recording media (such as memory cards for cameras) which are individually managed by a file system, and an information processing device using this file management method (see page 1, lines 6-10 of the specification).

In Fig. 1, a system memory 102 is a memory utilized by a program which runs on the information processing device. A

program storage 103 is a part for storing an application program and the like that run on the information processing device. A access controller 104 controls access to information recording media 106. An information processing device 100 is provided with the slots 105A, 105B, ... and 105N, to which a plurality of information recording media 106A, 106B, ... and 106N are attached, and can access data stored in these information recording media (see page 9, line 18 - page 10, line 7 of the specification).

Fig. 4 is a diagram showing a configuration of the file system control information. File system control information 400 is formed of slot information 401 and open information 402. The slot information 401 is information for controlling individual file systems constructed within the plurality of information recording media 106. The open information 402 is information on an opened file.

The slot information 401 includes slot numbers, insertion flags, and the priority order and system information. The insertion flag is a flag indicating whether or not an information recording medium is inserted into each slot. The priority order indicates a priority for use of the slots. The system information is information on file systems constructed within the

inserted information recording media. Sets of information of which the number is the same as that of the slots that exist within the information processing device are retained, where one set of information consists of the above-described four pieces of information. System information 403 is information required for accessing a file system constructed within one information recording medium. The system information 403 is formed of medium ID, region information, cluster size, sector size, empty region length, FAT memory, update flag and the like (see page 14, line 11 - page 15, line 10 of the specification).

The file system controller 103b of Fig. 1 accesses a file within an information recording medium 105 (such as a memory card from a camera) on the basis of the system information 403. The slot information 401 includes pieces of system information 403 of which the number is the same as that of the slots existing in the information processing device 100. The file system controller 103b switches the system information 403 to be utilized in accordance with the slot number upon accessing each information recording medium 105.

The open information 402 retains pieces of file information 404, which is information concerning the opened files, of which

the number is the same as that of the files that have been opened. File information 404 is formed of access information, slot numbers and flags for files having the same name. The access information 405 is information required for accessing a file. The slot numbers are numbers indicating the information recording media which store files. The flags for files having the same name are flags indicating whether or not a file having the same file name exists in another information recording medium.

Furthermore, the access information 405 is formed of a file name, file size, attribute of file, starting cluster number, update flag and the like. The starting cluster number is the number indicating the starting position of the region where data of a file is stored. The update flag is a flag indicating whether or not a file is updated. The file system controller 103b of Fig. 1 accesses a file that has been opened on the basis of these pieces of information.

The present invention has features in that the slot numbers which indicate the information recording media 105 where files have been stored and the flags for files having the same name that indicate the existence of a same file name exist in the file

information 404 included in the open information 402. In the present invention, if files having the same file name exist in a plurality of information recording media, one file is selected for use in accordance with the priority order stored in the slot information 401. In addition, the priority order of the respective slots can be arbitrarily set according to the application, and the application can utilize any desired file (see page 15, line 22 - page 18, line 4 of the specification).

By this amendment, independent claim 1 has been amended and recites:

"An information processing device to which a plurality of information recording media can be simultaneously attached when said plurality of information recording media exist in which data stored in an information recording region is managed as a file by means of an individual file system, comprising:

a plurality of slots which are provided in a body of said information processing device to attach the respective information recording media;

a system memory which retains file system control information for recognizing individual file systems constructed in said plurality of information recording media and unifying and

controlling the individual file systems into a single virtual file system, said file system control information including:

(1) slot information including a priority order retained in said file system control information showing a priority for use of the plurality of information recording media and system information showing a file system in said information recording media, and

(2) open information showing information on opened files as well as flags for files having the same name;

a file system controller which refers to said slot information and said open information, and which sets said flags and accesses a file in a logical information recording region of said information recording media based on the priority order when files having the same name exist in said plurality of information media; and

an access controller which selectively accesses one of the plurality of slots and accesses an address in said information recording media designated by said file system controller, and acquires data of a file". (added terms include underline).

These amendments clarify the access controller and the file system controller as well as the file system control information

and how they relate to the slots and the flags for files having the same name.

Independent claim 9 has been amended and recites:

"A file management method for managing data stored in respective information recording regions within a plurality of information recording media by means of a file system controller and an access controller of an information processing device, wherein said method comprising the steps of:

setting a utilization priority order for a plurality of slots to which said information recording media are attached,

creating slot information with system information in reference to data in a management information region recorded in one said information recording medium and data in a part of a data region when said information recording media are attached to any of said plurality of slots, and producing a part of file system control information through said file system controller,

upon opening a specific file from an information recording medium, referring to said slot information included in said file system control information and said priority order included in said file system control information, accessing all of the information recording media attached to the slots, confirming

whether or not a file that is designated by an application exists, creating open information when a designated file exists, registering a flag that indicates whether or not a file having the same name exists with said open information, and thereby, producing the rest of said file system control information, and thus constructing a unified file system where individual systems in said plurality of information recording media are unified through said file system controller,

upon reading out data of a specific file from said information recording medium, referring to open information of said file system control information by using a file handle acquired at the time of file opening from said application, determining which slot information is to be utilized, and giving the obtained slot number to said access controller, and thereby reading out file data required for said application from a specific information recording medium through said file system controller, and

upon recording file data on said information recording medium, referring to said file system control information by using a file handle acquired at the time of file opening from said application determining which slot information is to be utilized,

and giving the obtained slot number to said access controller, and thereby recording file data produced by said application in a specific information recording medium, and updating slot information of said file system control information through said file system controller" (added terms include underline).

These features in claims 1 and 9 are not shown or suggested by Moore et al.

Moore et al. relate to file systems, and more particularly, to a file system shell (see page 1, paragraph [0002]). Moore et al. disclose a device with a plurality of information recording media simultaneously attached.

Moore et al. disclose that in Fig. 42, a virtual address's selection criteria may reference files stored in a specific location in the file system hierarchy (see page 16, paragraph [0220]).

Moore et al. also disclose that Fig. 44A illustrates manipulating a segment of the virtual address 1404 in the virtual address bar 1402 in order to navigate in a computer file system. Each virtual address bar, such as virtual address bar 1402, is comprised of one of more interactive segments, such as segments 1502, 1504, 1506, and 1508 (see pages 16-17, paragraph [0221]).

Moore et al. do not disclose "An information processing device …, comprising: a plurality of slots …; a system memory which retains file system control information for recognizing individual file systems constructed in said plurality of information recording media and unifying and controlling the individual file systems into a single virtual file system, said file system control information including:

(1) slot information including a priority order retained in said file system control information showing a priority for use of the plurality of information recording media and system information showing a file system in said information recording media, and

(2) open information showing information on opened files as well as flags for files having the same name;

a file system controller which refers to said slot information and said open information, and which sets said flags and accesses a file in a logical information recording region of said information recording media based on the priority order when files having the same name exist in said plurality of information media; and

an access controller which selectively accesses one of the plurality of slots and accesses an address in said information recording media designated by said file system controller, and acquires data of a file" as claimed in independent claim 1.

Also, Moore et al. do not disclose the steps of "A file management method … comprising the steps of:

setting a utilization priority order for a plurality of slots to which said information recording media are attached,

creating slot information with system information in reference to data in a management information region recorded in one said information recording medium and data in a part of a data region when said information recording media are attached to any of said plurality of slots, and producing a part of file system control information through said file system controller,

upon opening a specific file from an information recording medium, referring to said slot information included in said file system control information and said priority order included in said file system control information, accessing all of the information recording media attached to the slots, confirming whether or not a file that is designated by an application exists, creating open information when a designated file exists,

registering a flag that indicates whether or not a file having the same name exists with said open information, and thereby, producing the rest of said file system control information, and thus constructing a unified file system where individual systems in said plurality of information recording media are unified through said file system controller,

upon reading out data of a specific file from said information recording medium, referring to open information of said file system control information by using a file handle acquired at the time of file opening from said application, determining which slot information is to be utilized, and giving the obtained slot number to said access controller, and thereby reading out file data required for said application from a specific information recording medium through said file system controller, and

upon recording file data on said information recording medium, referring to said file system control information by using a file handle acquired at the time of file opening from said application determining which slot information is to be utilized, and giving the obtained slot number to said access controller, and thereby recording file data produced by said application in a

specific information recording medium, and updating slot information of said file system control information through said file system controller" as claimed in independent claim 9.

Applicants respectfully submit that Moore et al. do not refer to a case where a plurality of files with the same name exist in the plural recording media. In the present invention, a priority management system is claimed in which one file is selected in accordance with the priority order.

In addition, Moore et al. do not disclose the slot information includes slot numbers, insertion flags, priority order, and system information. More specifically, Moore et al. do not disclose that priority order indicates a priority for use of the slots. Also, Moore et al. do not disclose that the number of the sets of information is the same that of the number of slots that exist within the information processing device where the sets of information are retained.

In view of foregoing claim amendments and remarks, it is respectfully submitted that the application is now in condition for allowance and an action to this effect is respectfully requested.

If there are any questions or concerns regarding the amendments or these remarks, the Examiner is requested to telephone the undersigned at the telephone number listed below.

Respectfully submitted,

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